

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 48

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte IAN H. COATES, ALEXANDER W. OXFORD, PETER C. NORTH,
THOMAS MILLER, ANTHONY D. BAXTER and KEVIN I. HAMMOND

Appeal No. 1996-2321
Application No. 08/137,228

HEARD: March 21, 2000

Before OWENS, WALTZ, and KRATZ, Administrative Patent Judges.

WALTZ, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the examiner's refusal to allow claims 2, 6, 8 through 10 and 12 as amended subsequent to the final rejection (see the amendment dated Feb. 13, 1995, Paper No. 33, entered as per the advisory Action dated Mar. 2, 1995, Paper No. 35, and the amendment accompanying the Brief dated May 15, 1995, Paper No.

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37, entered as noted on page 2 of the Answer).¹ Claim 13 is the only other claim remaining in this application and has been allowed by the examiner (Answer, page 1).

According to appellants, the invention is directed to a process for preparing an N-alkylated pyrido [4,3-b] indole of formula (I) by reacting the pyrido [4,3-b] indole of formula (II) with an alcohol of formula (III) in the presence of an acid at an elevated temperature (Brief, pages 2-3). Claim 12 is illustrative of the subject matter on appeal and a copy of this claim is attached as an Appendix to this decision.

The examiner has relied upon the following reference as evidence of obviousness:

Challis et al. (Challis), *The Chemistry of Amides*, pp. 753-54 and 848, Interscience Publishers, 1970.²

Appellants rely upon the following reference in rebuttal to the examiner's evidence of obviousness (Brief, page 7):
Bredereck et al. (Bredereck), *Chem. Ber.*, **92**, 329 (1959).

¹All reference to the examiner's Answer will be to the Answer dated Jan. 6, 2000, Paper No. 45.

²The Answer refers to only pages 753-754 of Challis (see page 2) but the Challis reference of record contains pages 753, 754 and 848.

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All of the claims on appeal stand rejected under 35
U.S.C.

§ 103 as unpatentable over Challis (Answer, page 2). We
reverse this rejection for reasons which follow.

OPINION

In the rejection of the claims on appeal, the examiner finds that "Challis teaches that amides can be N-alkylated with alcohols in the presence of trace amounts of mineral acid. Appellants claim the N-alkylation of an amide with an acid." (Answer, paragraph bridging pages 2-3). Although the examiner recognizes that the amide starting material and N-alkylated product differ from those taught by Challis, the examiner concludes that the application of an "old process" using different, yet analogous, reactants "with nothing more than expected results ensuing is obvious," citing *In re Durden*³ (Answer, page 3).

However, we agree with appellants' arguments on pages 5-7 of the Brief that the examiner's factual findings are in error since Challis only relates to the alkylation of "alkyl amides"

³763 F.2d 1406, 226 USPQ 359 (Fed. Cir. 1985).

and not "amides" in general, much less the specific lactam starting material recited in claim 12 on appeal (see Challis, page 753).⁴ The examiner has not cited any objective evidence or compelling reasons to support the conclusion that "a cyclic amide [a lactam] ... would thus be expected to react in a manner analogous to an acyclic amide." (Answer, page 4). Furthermore, Challis does not disclose or teach that alkylation occurs at the *nitrogen* of the amide when alkylated with alcohols but merely teaches that "akylation" occurs, with reference to footnote 1b (i.e., with reference to Bredereck, see Challis, pages 754 and 848). Appellants state, on page 7 of the Brief, that Bredereck only discloses the reaction of a formamide with an alcohol to form a C-alkylation product, with no teaching of any alkylation of the amide nitrogen. The

⁴The examiner has applied McMurry, *Organic Chemistry*, p. 795, Brooks/Cole Publishing Co., 1984, to show that it is well known that a lactam is a cyclic amide (Answer, page 3, and Supplemental Answer, pages 1-2). This reference has not been listed in the prior art cited by the examiner and does not appear in the statement of the rejection in the Answer. Accordingly, we will not consider this reference as part of the examiner's evidence of obviousness. See *In re Hoch*, 428 F.2d 1341, 1342 n.3, 166 USPQ 406, 407 n.3 (CCPA 1970); *Ex parte Raske*, 28 USPQ2d 1304, 1304-05 (Bd. Pat. App. & Int. 1993).

examiner has not contested appellants' interpretation of Brederick in the Answer.

Finally, with respect to the obviousness of "old processes" using different but analogous reactants, our reviewing court has stated:

The examiner erred by indulging in an essentially hindsight comparison of the functioning of the new acid in claim 6 as a precursor to the claimed cephem with that of other acids in the prior art processes that produced other cepheims. Such a comparison uses Ochiai's specification as though it were prior art in order to make the claim to a method that uses the nonobvious acid to make the nonobvious cephem appear to be obvious. Second, the examiner incorrectly drew from *Durden*, a case turning on specific facts, a general obviousness rule: namely, that a process claim is obvious if the prior art references disclose the same general process using "similar" starting materials [footnote omitted]. No such *per se* rule exists.⁵

Similarly to *Ochiai* and *Brouwer, supra*, the examiner in this appeal has not made the particularized fact-intensive inquiry required by 35 U.S.C. § 103 but has instead grounded the rejection on the supposedly controlling effect of *Durden, supra*. As noted by the court in *Ochiai* and *Brouwer*, reliance

⁵*In re Ochiai*, 71 F.3d 1565, 1570, 37 USPQ2d 1127, 1131-32 (Fed. Cir. 1995); see also *In re Brouwer*, 77 F.3d 422, 425-26, 37 USPQ2d 1663, 1666 (Fed. Cir. 1996).

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on *per se* rules of obviousness is legally incorrect and the examiner must establish that the invention *as claimed* would have been obvious over the cited prior art, based on the specific comparison of that prior art with the claim limitations. *In re Ochiai*, 71 F.3d at 1572, 37 USPQ2d at 1133.

For the foregoing reasons, we find that the examiner has not established a *prima facie* case of obviousness in view of the reference evidence. Because we reverse the examiner's rejection on the basis of failure to establish a *prima facie* case of obviousness, we need not discuss the sufficiency of the showing of unexpected results (see the Brief, pages 8-10, and the Answer, page 6). *In re Geiger*, 815 F.2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987). Accordingly, the rejection of claims 2, 6, 8-10 and 12 under 35 U.S.C. § 103 as unpatentable over Challis is reversed.

The decision of the examiner is reversed.

REVERSED

TERRY J. OWENS)
Administrative Patent Judge)

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THOMAS A. WALTZ
Administrative Patent Judge

PETER F. KRATZ
Administrative Patent Judge

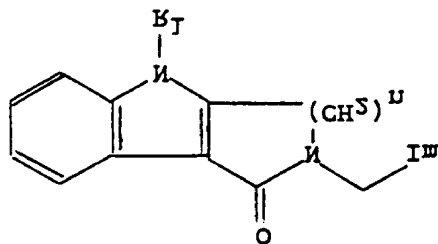
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APPENDIX



(I)

--15. A process for the preparation of a compound of formula (I):

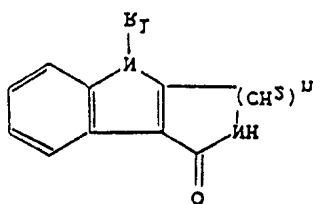
solvent, followed where necessary by removal of any protecting groups.--

phosphoric acid at a temperature of from 100 to 300°C in a high boiling polar
or a salt thereof in the presence of an acid which is a strong mineral acid or a



(III)

or a protected derivative thereof, with a compound of formula (III):



(II)

which comprises reacting a compound of formula (II)

a physiologically acceptable salt or solvate thereof:

B₃ each represent a hydrogen atom, B₄ represents a methyl group; and n represents 3; or

and B₁ represents a hydrogen atom or a methyl, ethyl, n-propyl or isopropyl group, B₅ and



wherein I_W represents an imidazolyl group of the formula:

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Leticia

APJ WALTZ

APJ OWENS

APJ KRATZ

DECISION: REVERSED
Send Reference(s): Yes No
or Translation (s)
Panel Change: Yes No
Index Sheet-2901 Rejection(s):

Prepared: February 6, 2001

Draft Final

3 MEM. CONF. Y N

OB/HD GAU

PALM / ACTS 2 / BOOK
DISK (FOIA) / REPORT